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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
TAKASHI KUBO, ET AL. : EXAMINER: RONESI, V.
SERIAL NO: 10/693,881 :
FILED: OCTOBER 28, 2003 : GROUP ART UNIT: 1714
FOR: POLYESTER RESIN COMPOSITION :
FOR TONER

DECLARATION UNDER 37 C.F.R. §1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Now comes Takashi Kubo who deposes and declares that:

1. I am a graduate of Keio University and received my masters' degree in applied chemistry in the year 2001.
2. Since 2001 I have been employed by the Kao Corporation, as a researcher in the Performance Chemicals Research Laboratories in Wakayama, Japan engaged in research and development of toner and toner binder with polyester resin.
3. I am a named inventor of the above-identified application.
4. The following experiments were conducted by me or under my direct supervision and control.

The same procedures were carried out as in Example 1 of the present specification except that 0.3 parts by weight of each titanium compound shown in Table A was used in place of titanium diisopropylate bis(triethanolamine), to give Toners A to D.

TEST EXAMPLE

The degree of coloration of resin, the durability and the color reproducibility were evaluated for Toners A to D according to Test Examples 1 to 3 of the present specification.



Table A

Titanium Compound		Phosphorus Compound		Tm (°C)	Tg (°C)	Degree of Coloration (ΔE)	Durability	Color Reproducibility
Kind	Amount Used	Kind	Amount Used					
Toner A Tetraisopropyl Titanate	Ti(C ₃ H ₇ O) ₄ 0.3	P1	0.3	101.2	62.3	Δ(9.7)	○	○
Toner B Tetraethyl Titanate	Ti(C ₄ H ₉ O) ₄ 0.3	P1	0.3	102.2	63.1	Δ(8.5)	○	○
Toner C Tetraoctyl Titanate	Ti(C ₈ H ₁₇ O) ₄ 0.3	P1	0.3	102.6	63.0	○(4.6)	○	◎
Toner D Tetrastearyl Titanate	Ti(C ₁₈ H ₃₇ O) ₄ 0.3	P1	0.3	103.5	64.2	○(4.0)	○	◎

Note) The amounts of the titanium compound and the phosphorus compound used are expressed in weight ratio based on 100 parts by weight of the raw material monomers for the resin composition.

P1: Polyphosphoric Acid

It can be seen from the above results that since Toners C and D contain a polyester resin composition obtained from a tetrasubstituted titanium compound, of which substituent has 8 to 18 carbon atoms, there are exhibited some excellent unexpected effects, particularly in the degree of coloration, as compared to those of Toners A and B.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is believed to be true and correct.

Takashi Kubo

Takashi Kubo

2/1/2006

Date